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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,172	12/06/2001	Ian P. Kersley	AACI-P01-001	1197

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EXAMINER

PEARSON, YVETTE B

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/016,172

Applicant(s)

KERSLEY ET AL.

Examiner

Yvette Pearson

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 6, 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>February 14, 2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1- 18 are presented for examination in the application.
2. Acknowledgement is made of Information Disclosure document filed February 14, 2002.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 - 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Hannel et al (US 2003/0088664).
4. As per Claim 1, Hannel teaches a method for testing network communication devices (Page 2, ¶ 29; Figure 2) comprising
 - a). Packet Processors (Figure 2, #110, #118, #120) which represent network connections that generate packet descriptors for sending response packets to the Device under Test (Page 5, ¶ 48),

- b). Packet Classification, Response and Packet Tables (Figure 5B, #500, # 502, 504) used by Packet Processors that assign packet identifiers to *each* packet whereby the Processor Devices classify incoming packets and determine packet format, (Page 5, ¶ 50),
 - c). Packet Processors (Figure 2, #110, #118, #120) that generate a packet corresponding to the Packet Descriptor by including the appropriate bits in the TCP and network headers to be sent to the device under test (Page 5, ¶ 48; Figure 5A, # ST5),
 - d). Packet Processors (Figure 2, #110, #118, #120) that transmit the constructed packets to the Device under Test (Page 5, ¶ 49; Figure 5A, # ST6),
 - e). Packet Processors (Figure 2, #110, #118, #120) that identify processed packets based on searching the packet for various patterns stored in the Packet Classification ID on the Packet Classification Table (Page 5, ¶ 52; Figure 5B, #500) and,
 - f). Packet Processors (Figure 2, #110, #118, #120) that locate a *matching pattern* from the Response Table (Figure 5B, #502) by extracting the Packet Classification ID to use this value to obtain Packet (Figure 5B, # 504) associated with the response (Page 5, ¶ 54.)
5. As per Claims 2 and 3, Hannel teaches the method of testing network communication devices as described above wherein a generated packet descriptor is stored in a packet identifier database ([Packet] Figure 5B, #504) such that the packet descriptor can be retrieved from the packet database based on packet identifier (Packet

Classification ID] Page 5, ¶ 50; Figure 5B, #500) as specified by HTTP language requests (Page 6, ¶ 58.)

6. As per Claim 4, Hannel teaches the method for testing network communication devices as described above wherein the packet identifier is a frame sequence number (Page 2, ¶ 20; Figure 1.)

7. As per Claims 5 and 6, Hannel teaches the method of testing network communication devices as described above wherein the packet processor searches the packet according to the Packet Classification (Figure 5B, #500) and uses the packet classification ID to generate a response from Response Table (Figure 5B, #502) while repeating this process for each response until the desired packet is sent (Page 5, ¶ 54; Figure 6.)

8. As per Claim 7, Hannel teaches the method of testing network communication devices as described above wherein the packet processor (Figure 2, #110, #118, #120) generates a response packet by setting the appropriate bits in the TCP and network headers, which may be determined by the fields in the received packet (Page 5, ¶ 48) and the TCP/Application capability (Page 7, Table 3.)

9. As per Claim 8, Hannel teaches the method of testing network communication devices as described above wherein a queue of packet descriptors having the corresponding packet identifier are transmitted to the device ([multiple responses for a given packet whereby the responses may be ordered and executed in sequence] Page 5, ¶ 52.)

10. As per Claim 9, Hannel teaches the method for testing network communication devices as described above wherein a plurality of packet descriptors form a *flow representing a transmission rate of packet descriptors* (multiple responses for a given packet classification type) whereby a plurality of flows combine into a port queue to the device for processing ([each packet response may include a packet classification identifier, a starting packet identifier, the number of packets to be included in the response packet] (Page 5, ¶ 52.))

11. As per Claims 10, 11 and 12, Hannel teaches the method of testing network communication devices as described above wherein combining and receiving a plurality of packet flows includes aggregating/merging and de-multiplexing flows ([Transmit/Receiving Field Programmable Gate Arrays {TX/RX FPGAs} direct packets from the physical network interface to internal processors] Page 3, ¶ 37 & 38; Figure 3, #204 & #208) in addition to analyzing the de-multiplexed flows to provide statistics of flows ([TCP/IP stacks maintain performance metrics to measure TCP connections] Page 3, ¶ 32; Figure 2, # 108.)

12. As per Claim 13, Hannel teaches the method for testing network communication devices as described above wherein a the Devise Under Test is a network device such as a Server Load Balancer (Page 2, ¶ 29.)

13. As per Claim 14, Hannel teaches a method for testing network communication devices (Page 2, ¶ 29; Figure 2) comprising

- a). Packet Classification, Response and Packet Tables (Figure 5B, #500, # 502, 504) used by Packet Processors to assign packet identifiers to *each* packet descriptor (Page 5, ¶ 50),
 - b). Packet Processors (Page 5, ¶ 48; Figure 2, #110, #118, #120) coupled to the device under test (Figure 2, #106) that generate a packet corresponding to the receiving packet descriptor by including the appropriate bits in the TCP and network headers to be sent to the device under test (Page 5, ¶ 48; Figure 5A, #ST5),
 - c). Packet Processors (Figure 2, #110, #118, #120) that locate a *matching pattern* from the Response Table (Figure 5B, #502) by extracting the Packet Classification ID to use this value to obtain Packet (Figure 5B, # 504) associated with the response (Page 5, ¶ 54.)
 - d). Packet Processors (Figure 2, #110, #118, #120) that utilize a packet checker method to compare the identified packet with a corresponding packet identifier in the Response packet database (Figure 5B, #502) having multiple packets corresponding to each packet identifier (Page 5, ¶ 53.)
14. As per Claim 15, Hannel teaches the method for testing network communication devices as described above with respect to Claim 14 wherein the packet identifier in the Response Table (Figure 5B, #502) is used to locate a corresponding packet template based on data extracted from received packets (Page 5, ¶ 53.)

15. As per Claim 16, Hannel teaches the method for testing network communication devices as described above with respect to Claim 14 wherein the packet identifier is a frame sequence number (Page 2, ¶ 20; Figure 1.)

16. As per Claim 17, Hannel teaches the method of testing network communication devices as described above with respect to Claim 14 wherein a queue of packets having the corresponding packet identifier are transmitted to the device ([multiple responses for a given packet whereby the responses may be ordered and executed in sequence] Page 5, ¶ 52.)

17. As per Claim 18, Hannel teaches a method for testing a device under test implemented in software (Page 2, ¶ 29; Page 3, ¶ 35; Figure 2) comprising

a). Packet Processors (Figure 2, #110, #118, #120) which represent network connections that generate packet descriptors for sending response packets to the Device under Test (Page 5, ¶ 48), and assign packet identifiers to *each* packet whereby the Processor Devices classify incoming packets and determine packet format, (Page 5, ¶ 50),

b). Packet Processors (Figure 2, #110, #118, #120) that generate a packet corresponding to the Packet Descriptor by including the appropriate bits in the TCP and network headers to be sent to the device under test (Page 5, ¶ 48; Figure 5A, # ST5),

c). Packet Processors (Figure 2, #110, #118, #120) that transmit the constructed packets to the Device under Test (Page 5, ¶ 49; Figure 5A, # ST6),

d). Packet Processors (Figure 2, #110, #118, #120) that locate a *matching pattern* from the Response Table (Figure 5B, #502) by extracting the Packet Classification ID to use this value to obtain Packet (Figure 5B, # 504) regarding a previously received packet (Page 5, ¶ 54.)

18. Thus, Hannel discloses all limitations of the rejected claims; therefore Hannel anticipates the subject matter of Claims 1 – 18.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. US 6,457,152, (Paley et al) discloses a method of testing a device wherein the output is generated by the device in response to an applied test command.

21. US 2002/0095634 (Bhasin et al) discloses a method of testing a device wherein the criteria determines the sequence in which networked data packets should be transmitted by the device under test.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette Pearson whose telephone number is 571 272-4227. The examiner can normally be reached on 9:00am-5:30pm.

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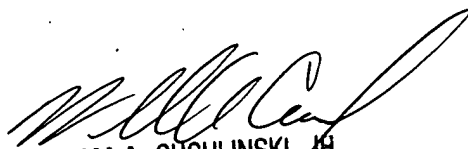
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Cuchlinski can be reached on 571 272-3925. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yvette Pearson

Examiner

Art Unit 2144


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